

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,072 DTD \_\_\_\_\_

CHANGE NO: 41

MODEL: 22-21 {#1  
#4} (Convair "880")

TITLE: Interior Seating Arrangement, Revision to

ORIGIN: Cable, Pena to Chambers, dated 13 July 1961

REASON FOR CHANGE: Customer request

### EFFECT ON WEIGHT \*

### EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

+114.0 lb

+119.0 lb

+110,230

INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND  
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON  
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*Ready 9/4/61*

ENGINEERING APPROVAL

*WS*

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_

Title: Interior Seating Arrangement, Revision to  
Origin: Cable, Pena to Chambers, dated 13 July 1961.  
Reason for Change: Customer request  
Description of Change:

Page 1, Paragraph 1.1 BASIC TYPE:

Change the paragraph title to read as follows:

"BASIC TYPE: (Effective Ship 1)"

Add the following new paragraph:

"1.1 BASIC TYPE: (Effective Ships 2 and on) The Convair 880 (Model 22) is a swept wing, four-engine turbojet commercial transport. It is a pressurized land plane of medium range, high speed, high altitude capabilities. The body of this specification describes an interior for a mixed seating arrangement which provides for 32 first class seats, a 12-place saleable club area and 49 coach seats. Provisions are incorporated in the design of the airplane to permit conversion to alternate all first class or all coach seating arrangements."

Page 3b, INTERIOR SEATING ARRANGEMENT - ILLUSTRATION

Add the following below the legend:

"(Effective Ship 1)"

Add the following new page:

"Page 3b-1, INTERIOR SEATING ARRANGEMENT - ILLUSTRATION  
(Effective Ships 2 and on)"

Page 79, Paragraph 3.19.1 GENERAL:

Add the following after the paragraph title:

"(Effective Ship 1)"

Add the following new paragraph:



"3.9.1 GENERAL: (Effective Ships 2 and on) The interior shall include furnishings and equipment for 93 passengers and crew accommodations as shown on illustration herein. In addition, the interior shall be designed to permit conversion to the alternate arrangements as specified in 1.1. These arrangements include a first class version and an all coach version with five across seating."

Page A-2, APPENDIX I-B, FURNISHINGS EQUIPMENT:

Change the below item in the equipment list as follows:

<u>From:</u>	*107	Life Vest	187.0
<u>To:</u>	##107	Life Vest	187.0
	##110	Life Vest	192.0

Add the following to bottom of page:

##Effective Ship 1

##Effective Ships 2 and on

Page A-15, APPENDIX I-C, FURNISHINGS:

Change the below items in the equipment list as follows:

<u>From:</u>	23	Seats, Double (First Class)
	6	Seats, Triple (Coach)
	7	Seats, Double (Coach)
	69	Tray, Integral Folding Food
	90	Belt, Passenger Safety
<u>To:</u>	#23	Seats, Double (First Class)
	#6	Seats, Triple (Coach)
	#7	Seats, Double (Coach)
	#69	Trays, Integral Folding Food
	#90	Belts, Passenger Safety
	##17	Seats, Double (First Class)
	##9	Seats, Triple (Coach)
	##10	Seats, Double (Coach)
	##72	Trays, Integral Folding Food
	##93	Belts, Passenger Safety

Add the following items to the equipment list:

- 4 Seats, Club Area (Double)
- 1 Seat, Club Area (Quadruple)

Add the following to bottom of page:

#Effective Ship 1

##Effective Ships 2 and on

Effect on Operating Weight Empty:	+119.0 pounds
Effect on Weight Empty:	+114.0 pounds
Effect on Balance:	+110,230 inch-pounds
Effect on Performance:	None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,024 DTD \_\_\_\_\_

CHANGE NO: 40

MODEL: 22-21 (#1)  
22-21 (#4) (Convair "880")

TITLE: Specification Administrative Change (Relocation of ADF Antennas)

ORIGIN: Convair initiated

REASON FOR CHANGE: To clarify location of subject antennas.

EFFECT ON WEIGHT \*

EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

0

0

0

INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND  
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON  
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*Ready 7/24/61*  
ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Relocation of ADF  
Antennas)

Origin: Convair initiated

Reason for Change: To clarify location of subject antennas.

Description of Change:

Page 75, Paragraph 3.17.3.1.1 ANTENNAS:

In the second line, change "bottom" to "top".

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,023 DTD \_\_\_\_\_

CHANGE NO: 39

MODEL: 22-21(#1)  
22-21(#4) (Convair "880")

TITLE: Specification Administrative Change (Revision to Lavatory Coat Hook)

ORIGIN: Convair initiated

REASON FOR CHANGE: To clarify the intent of the specification.

### EFFECT ON WEIGHT \*

### EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

0

0

0

INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Revision to Lavatory Coat Hook)

Origin: Convair initiated

Reason for Change: To clarify the intent of the specification.

Description of Change:

Page 83, Paragraph 3.19.2.2.3 MISCELLANEOUS LAVATORY EQUIPMENT:

Revise below item as follows:

From: "One coat hook (folding-type on lavatory door)"

To: "One coat hook"

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None



# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,071 DTD 6 July 1961

CHANGE NO: 38

MODEL: 22-21{#1}  
22-21{#4} (Convair "880")

TITLE: Sperry Integrated Instrument System, Changes to

ORIGIN: AVENSA requested

REASON FOR CHANGE: As above

EFFECT ON WEIGHT \*

EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

Negligible

Negligible

Negligible INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND  
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON  
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*MLL*  
*Ready 7/24/61*  
ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_

Title: Sperry Integrated Instrument System, Changes to

Origin: AVENSA requested

Reason for Change: As above

Description of Change:

Page 43A, PILOT'S AND COPILOT'S INSTRUMENT PANELS:

The above illustration will be revised to show the mode select switch relocated to the position now occupied by the static air temperature indicator, and the static air temperature indicator relocated to the position now occupied by the mode select switch. A flight director transfer switch will also be shown on center panel below relocated mode select switch.

Page 76, Add the following new paragraph after Paragraph 3.17.3.4.2:

"3.17.3.4.3 VHF NAVIGATION SIGNAL FOR FLIGHT DIRECTOR: A flight director transfer switch with "VOR/ILS-1" and "VOR/ILS-2" positions shall be installed. Two flags, each with "VOR/ILS-1" and "VOR/ILS-2" positions shall be installed. When the transfer switch is in the "VOR/ILS-1" position, the flight director system shall be connected to the No. 1 VHF navigation system and No. 1 glide slope, and both flags shall indicate "VOR/ILS-1" position. When the transfer switch is in the "VOR/ILS-2" position, the flight director system shall be connected to the No. 2 VHF navigation system and No. 2 glide slope, and both flags shall indicate "VOR/ILS-2" positions."

Effect on Weight Empty: Negligible  
Effect on Balance: Negligible  
Effect on Performance: None



SPEC NO.: ZD-22-321 DATE: \_\_\_\_\_  
CUSTOMER: AVENSA MCL 14,070 DTD 5 June 1961  
CHANGE NO: 37 MODEL: 22-21(#1) (Convair "880")



Title: VHF Navigation Equipment, Replacement of

Origin: Meeting between Captain Mendoza of AVENSA and M. L. Clayton  
of Convair on 2 June 1961.

Reason for Change: Customer request

Description of Change:

Page A-9, APPENDIX I-C, ELECTRONIC EQUIPMENT:

Revise the below item under "VHF NAVIGATION SYSTEM" as follows:

<u>From:</u>	"2 Receiver (AC Power)	522-0968-035	51R-4"
<u>To:</u>	"2 Receiver (AC Power)	97-30002-004	51X-2
	2 Power Supply	92-22801-001	344B-1"

Effect on Weight Empty: +2.0 pounds  
Effect on Balance: +550 inch-pounds  
Effect on Performance: None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14.022 DTD \_\_\_\_\_

CHANGE NO: 34

(#1)  
MODEL: 22-21 (#4) (Convair "880")

TITLE: Specification Administrative Change (Revision to Paragraph 3.2.2.1)

ORIGIN: Convair initiated

REASON FOR CHANGE: Specification clarification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	0 INCH LB.
0	0	

EFFECT ON GUARANTEED PERFORMANCE: \*  
None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

  
ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE: \_\_\_\_\_

AIRPLANES AFFECTED: \_\_\_\_\_

SPECIAL PROVISIONS: \_\_\_\_\_

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_

Title: Specification Administrative Change (Revision to Paragraph 3.2.2.1)

Origin: Convair initiated

Reason for Change: Specification clarification

Description of Change:

Page 9, Paragraph 3.2.2.1 COLOR CODING:

Revise the paragraph as follows:

From: "COLOR CODING: All sections of plumbing shall be color coded and banded in accordance with Military Standards and, in addition, marking shall indicate the direction of flow and the purpose of the line. The part number of each tubing assembly shall be identified. Color bands and part number identifications shall be plastic tape in accordance with Standard AND 10375."

To: "COLOR CODING: All sections of plumbing, except engine and within fuel tanks, shall be color coded and banded. All plumbing shall indicate the direction of flow and the purpose of the line. The part number of each tubing assembly shall be identified. Color bands shall be plastic tape in accordance with Standard AND 10375."

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None



# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,069 DTD 5 June 1961

CHANGE NO: 36

22-21(#1)  
MODEL: 22-21(#4) (Convair "880")

TITLE: Sperry Integrated Instrument System, Changes to

ORIGIN: Meeting between Captain Mendoza of AVENSA and M. L. Clayton of Convair on 2 June 1961.

REASON FOR CHANGE: Customer request

EFFECT ON WEIGHT \*

EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

Negligible

Negligible

Negligible

INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*Ready 6/8/61*

ENGINEERING APPROVAL *W/S*

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_

CONVAIR: SD

AVENSA  
Change No. 36

Title: Sperry Integrated Instrument System, Changes to

Origin: Meeting between Captain Mendoza of AVENSA and M. L. Clayton  
of Convair on 2 June 1961.

Reason for Change: Customer request

Description of Change:

Page 43A, PILOT'S AND COPILOT'S INSTRUMENT PANELS:

The above illustration will be revised to show the mode select switch relocated to the position now occupied by the static air temperature indicator, and the static air temperature indicator relocated to the position now occupied by the mode select switch.

Effect on Weight Empty: Negligible  
Effect on Balance: Negligible  
Effect on Performance: None

The following shall not appear in the specification language:

This proposal also includes changes to the flight director computer to permit VOR receiver No. 1 and glide slope receiver No. 1 to feed the flight director computer as well as the pilot's PDI. Also, the pilot's C6 compass and PDI to feed information directly to the flight director computer. Conversely, the copilot's instruments and VOR receiver No. 2 will feed the SP-30 autopilot.



# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-321

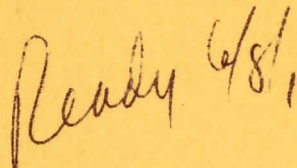
DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,068 DTD 5 June 1961

CHANGE NO: 35

MODEL: 22-21(#1)  
22-21(#4) (Convair "880")

TITLE: <u>Engine Starter Switch, Change of</u>		
ORIGIN: <u>Meeting between Captain Mendoza of AVENSA and M. L. Clayton of Convair on 2 June 1961</u>		
REASON FOR CHANGE: <u>Customer request</u>		
EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	Negligible INCH LB.
Negligible	Negligible	
EFFECT ON GUARANTEED PERFORMANCE: *		
None		
* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL		 ENGINEERING APPROVAL <i>W/S</i>
ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:		
LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:	
SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:	
	RECURRING: _____	
	NON-RECURRING: _____	
	TOTAL: _____	

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



CONVAIR: SD

AVENSA  
Change No. 35

Title: Engine Starter Switch, Change of

Origin: Meeting between Captain Mendoza of AVENSA and M. L.  
Clayton of Convair on 2 June 1961.

Reason for Change: Customer request

Description of Change:

The specification language is not effected by this change which proposes to replace the MS 35058-27 engine momentary on-off-momentary-on starter switch with a MS 35058-21 on-off-on switch.

Effect on Weight Empty:	Negligible
Effect on Balance:	Negligible
Effect on Performance:	None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,066 DTD 16 March 1961

CHANGE NO: 33

22-21 (#1)  
MODEL: 22-21 (#4) (Convair "880")

TITLE: Autopilot Line Analyzer Test Receptacles, Installation of

ORIGIN: Avensa Letter DM154(61), dated 9 March 1961

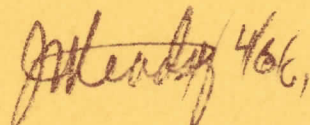
REASON FOR CHANGE: Customer request

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY		
+6.0 lb	+6.0 lb	+1,880	INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*  
None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*MCL*  
  
ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE: \_\_\_\_\_

AIRPLANES AFFECTED: \_\_\_\_\_

SPECIAL PROVISIONS: \_\_\_\_\_

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Autopilot Line Analyzer Test Receptacles, Installation of

Origin: AvenSA Letter DM154(61), dated 9 March 1961

Reason for Change: Customer request

Description of Change:

Page 27, Paragraph 3.10.4 - AUTOMATIC FLIGHT CONTROL:

Add the following to the end of the paragraph:

"(For line analyzer connection receptacles see Par. 3.16.10.8)"

Page 64, Add the following new paragraph to the page, after Paragraph 3.16.10.7:

"3.16.10.8 AUTOPILOT LINE ANALYZER RECEPTACLES: Two Cannon DFD connectors, to be used as line analyzer connection receptacles, with panel and the necessary wiring shall be installed between the autopilot rack and the left hand electronics rack".

Effect on Weight Empty: +6.0 pounds  
Effect on Balance: +1,880 inch-pounds  
Effect on Performance: None

The following shall not appear in specification language:

The installation will include two new DFD Cannon receptacles to be installed between autopilot rack and L.H. electronics rack (DFD Cannon receptacles No. DFD 2-156-33 SF with plugs No. DFD 2-156-34 PM).



# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,021 DTD \_\_\_\_\_

CHANGE NO: 32

MODEL: 22-21(#1)  
22-21(#4) (Convair "880")

TITLE: Specification Administrative Change (Landing Gear Pin Indicator Lights)

ORIGIN: Convair initiated

REASON FOR CHANGE: To specify that subject indicator lights are installed.

### EFFECT ON WEIGHT \*

### EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

0

0

0 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*mtc*  
*[Signature]* 4/5/61  
ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_

CONVAIR: SD

AVENSA  
Change No. 32

Title: Specification Administrative Change (Landing Gear Pin Indicator Lights)

Origin: Convair initiated

Reason for Change: To specify that subject indicator lights are installed.

Description of Change:

Page 21, Paragraph 3.8.1.5 LANDING GEAR SAFETY LOCK PINS:

Add the following to the end of the paragraph:

"Indicator warning lights shall be provided in the flight engineer's panel and shall be illuminated when the "safety lock" pins are inserted in the gear."

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None



# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,067 DTD 11 April 1961

CHANGE NO: 31A

MODEL: 22-21 (#4) (Convair "880")

TITLE: Passenger Seating, Changes to on No. 2 Airplane.

ORIGIN: Avensa Cable dated 11 April 1961, signed "LANZ".

REASON FOR CHANGE: Customer request to accomplish the change only on No. 2 Airplane, and revision to CCP No. 31.

### EFFECT ON WEIGHT \*

### EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

-487.0 lb

-515.0 lb

-453,202 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*W. L. Clayton*  
5/8/61

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Passenger Seating, Changes to on No. 2 Airplane.

Origin: Avenza Cable dated 11 April 1961, signed "LANZ".

Reason for Change: Customer request to accomplish this change only on No. 2 Airplane, and revision to CCP No. 31.

Description of Change:

Page vi, LIST OF ILLUSTRATIONS:

Revise the below item as follows:

<u>From:</u>	"Inboard Profile and Plan View (Standard)	3b"
<u>To:</u>	"Interior Seating Arrangement (No. 1 Airplane)	3b
	Interior Seating Arrangement (No. 2 Airplane)	3c"

Page 1, Paragraph 1.1 BASIC TYPE:

Add the following after the paragraph title:

"(Effective on No. 1 Airplane)"

Add the following new paragraph after the above paragraph:

"1.1 BASIC TYPE (Effective on No. 2 Airplane): The Convair "880" (Model 22) is a swept wing, four-engine, turbojet commercial transport. It is a pressurized land plane of medium range, high speed, high altitude capabilities. The body of this specification describes an interior for a mixed seating arrangement which provides for 28 first class seats, including a 12-place lounge, and 34 coach seats. Provisions are incorporated in the design of the airplane to permit conversion to an alternate all first class or all coach seating arrangements."

Page 3b, INTERIOR SEATING ARRANGEMENT:

Replace above illustration in the specification with Enclosure (A) which indicates that this illustration is applicable to No. 1 Airplane only.

Page 3c, INTERIOR SEATING ARRANGEMENT:

Add above page (Enclosure (B)) to the specification, which is identified as applicable to No. 2 Airplane.

Page 6, Add the following to the bottom of Page 6:

"This page applicable only to No. 1 Airplane."

Page 6-1, Add this page (Enclosure (C)) to the specification, which is only applicable to No. 2 Airplane.

Page 9, Paragraph 3.2.1 GENERAL INTERIOR ARRANGEMENT:

Revise the first sentence as follows:

From: "The standard interior arrangement of this airplane shall be as shown on the inboard plan and profile drawing."

To: "The standard interior arrangements of these airplanes shall be as shown on "Page 3b - INTERIOR SEATING ARRANGEMENT" for No. 1 Airplane, and "Page 3c - INTERIOR SEATING ARRANGEMENT" for No. 2 Airplane."

Page 79, Paragraph 3.19.1 GENERAL:

Revise the first sentence as follows:

From: "The interior shall include furnishings and equipment for 90 passengers and crew accommodations as shown on illustration herein."

To: "The interior shall include furnishings and equipment for 90 passengers in No. 1 Airplane and furnishings and equipment for 74 passengers in No. 2 Airplane, plus crew accommodations, as shown on illustrations herein."

Page 85, Paragraph 3.19.3.1 GENERAL ARRANGEMENT:

Revise the first sentence as follows:



From: "The standard fuselage interior general arrangement is shown in the illustration herein."

To: "The standard interior arrangements of these airplanes shall be as shown on "Page 3b - INTERIOR SEATING ARRANGEMENT" for No. 1 Airplane, and "Page 3c - INTERIOR SEATING ARRANGEMENT" for No. 2 Airplane."

Page A-2, APPENDIX I-B, FURNISHINGS EQUIPMENT:

Revise the below item under "Description" as follows:

<u>From:</u>	"107 *Life Vests	187.0"
<u>To:</u>	"107 *Life Vests (for No. 1 Airplane)	187.0"
	91 *Life Vests (for No. 2 Airplane)	159.0"

Page A-15, APPENDIX I-C, FURNISHINGS:

Revise the below items under "Description" as follows:

<u>From:</u>	"23 Seats, Double (First Class)
	6 Seats, Triple (Coach)
	7 Seats, Double (Coach)
	69 Tray, Integral Folding Food
	90 Belt, Passenger Safety"
<u>To:</u>	"23 **Seats, Double (First Class)
	6 **Seats, Triple (Coach)
	7 **Seats, Double (Coach)
	69 ***Tray, Integral Folding Food
	90 **Belt, Passenger Safety
	15 ***Seats, Double (First Class)
	6 ***Seats, Triple (Coach)
	7 ***Seats, Double (Coach)
	53 ***Tray, Integral Folding Food
	74 ***Belt, Passenger Safety"

Add the following to the bottom of Page A-15:

" \*\*Applicable only to No. 1 Airplane  
\*\*\*Applicable only to No. 2 Airplane"

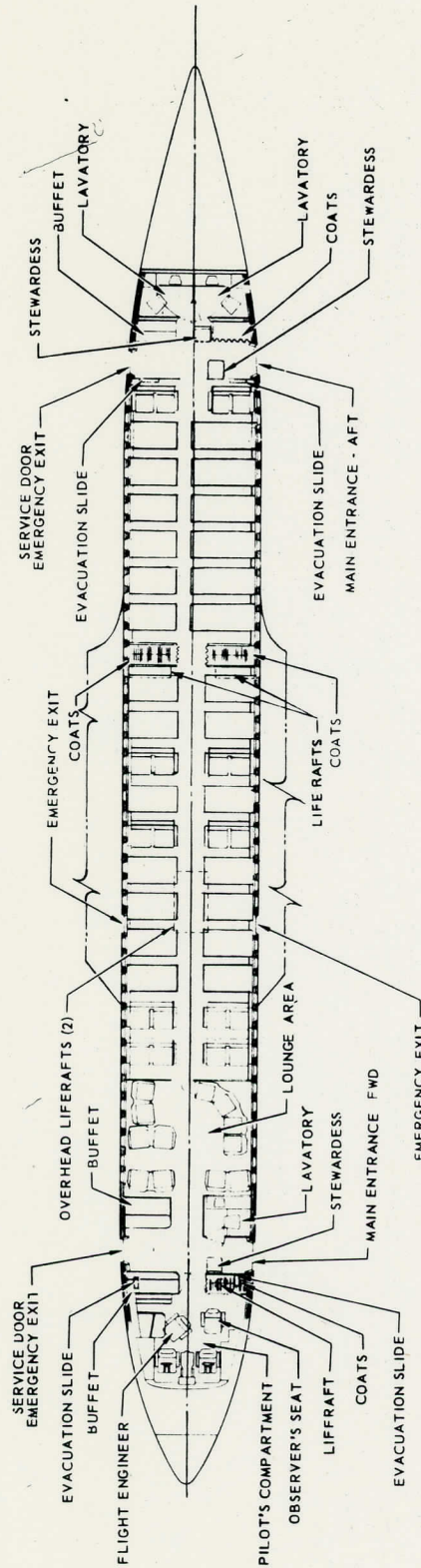


- Enclosures: (A) One copy Page 3b - INTERIOR SEATING ARRANGEMENT  
(Revised to indicate applicability only to No. 1  
Airplane)
- (B) One copy Page 3c - INTERIOR SEATING ARRANGEMENT  
(New page to be inserted in specification for  
applicability only to No. 2 Airplane)
- (C) One copy Page 6-1, TYPICAL LOADING SUMMARY:  
(New page to be inserted in specification for  
applicability only to No. 2 Airplane)

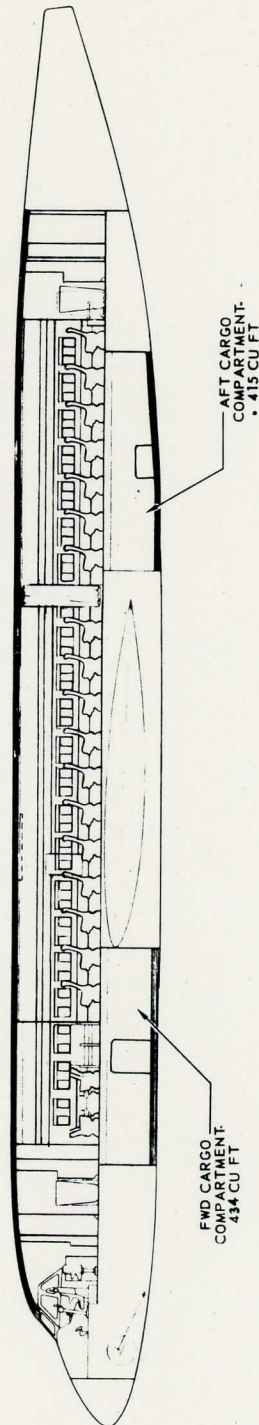
Effect on Weight Empty:	-487.0 pounds
Effect on Weight Empty Balance:	-428,534 inch-pounds
Effect on Operating Weight Empty:	-515.0 pounds
Effect on Operating Weight Empty Balance:	-453,202 inch-pounds
Effect on Performance:	None

The following shall not appear in the specification language:

The revised weights shown on Page 6-1 (Enclosure (C)) are applicable only as a result of this proposal and are computed on the basis of acceptance of Change Order No. 4. These weights will be further revised in the appropriate Change Order to include cumulative weights of other CCP'S comprising that Change Order.



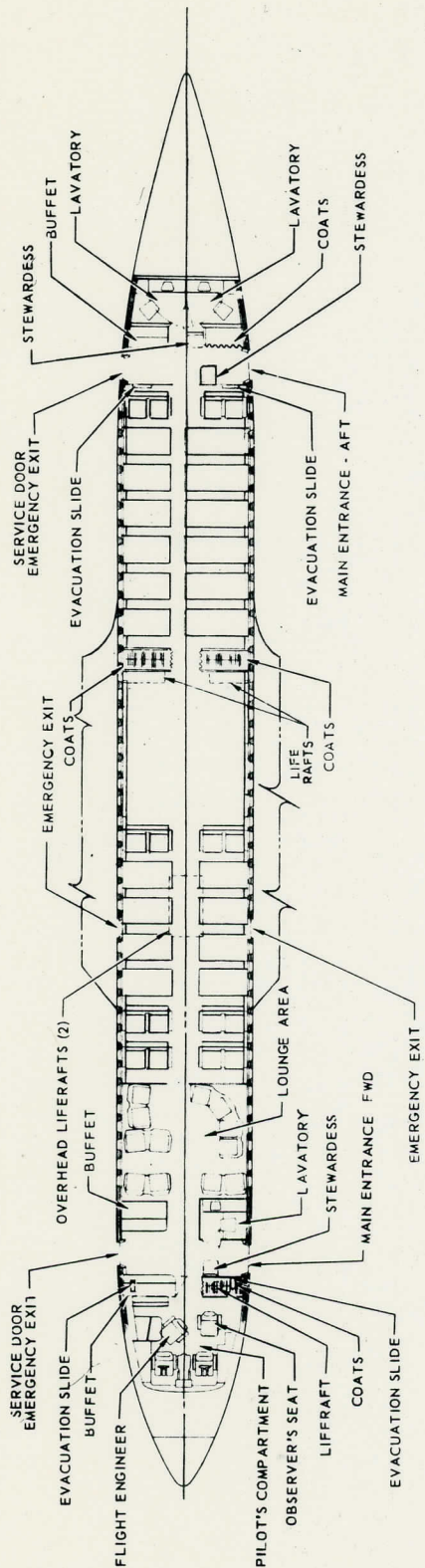
NOTE: ALL SEATS SPACED 38 INCHES  
CENTER TO CENTER



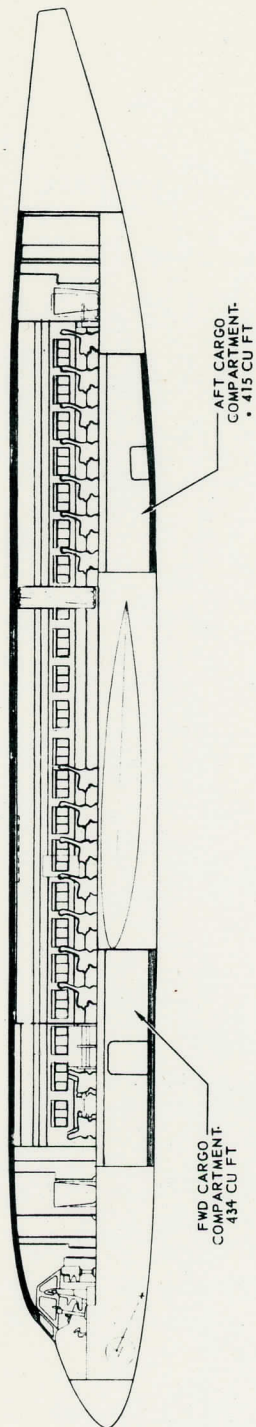
# INTERIOR SEATING ARRANGEMENT

44 FIRST CLASS PASSENGERS  
34 COACH CLASS PASSENGERS  
12 PLACE LOUNGE AREA  
AVENSA (NO. 1 AIRPLANE)





NOTE: ALL SEATS SPACED 38 INCHES  
CENTER TO CENTER



# INTERIOR SEATING ARRANGEMENT

28 FIRST CLASS PASSENGERS

34 COACH CLASS PASSENGERS

12 PLACE LOUNGE AREA

AVENSA (NO. 2 AIRPLANE)



MODEL 22

PAGE 6-1

DATE

REPORT NO. ZD-22-321

### 3.1 CHARACTERISTICS (Cont)

#### 3.1.2.2 TYPICAL LOADING SUMMARY:

Manufacturer's Weight Empty (dry)  
(Standard Configuration) 88,056 lb

Fixed Useful Load (Standard Configuration) 4,950 lb

Crew	
Pilots (2)	340 lb
Flight Engineer	170 lb
Cabin Attendants (3)	390 lb
Crew Baggage	90 lb
Unusable Fuel and Oil	631 lb
Flight Deck Equipment	50 lb
Emergency Equipment	185 lb
Oxygen Bottles (3)	140 lb
Passenger Service	1,500 lb
Water	425 lb
Oil	75 lb
Life Rafts (5)	755 lb
Life Vests (91)	159 lb
Emergency Transmitter (1)	40 lb

Operating Weight Empty 93,006 lb

Payload (space limits)\*  
(Standard Configuration) 20,700 lb

Weight - Less Fuel 113,706 lb

Fuel 56,294 lb

Gross Weight (Takeoff) 170,000 lb

Space Limit Payloads:	<u>Standard</u>	<u>Alternate Coach*</u>
Passengers @ 165 lb (74 Standard) (110 Alternate Coach)*	12,210	18,150 lb
Baggage @ 40 lb/passenger	2,960	4,400 lb
Cargo	5,530	4,090 lb
Total	20,700	26,640 lb

\*NOTE: Space limit alternate coach arrangement of 110 passengers required changing to five-abreast passenger seats.

This page applicable only to No. 2 Airplane.



File

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

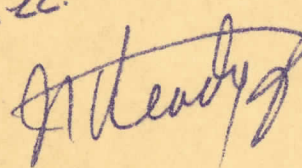
DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,020 DTD \_\_\_\_\_

CHANGE NO: 30

MODEL: 22-21 #1 & #4 (Convair "880"

TITLE: <u>Specification Administrative Change (Revision to RMI part number of</u>		
ORIGIN: <u>Convair initiated</u>		
REASON FOR CHANGE: <u>Specification correction and revision to RMI part number</u>		
EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	
<u>0</u>	<u>0</u>	<u>0</u> INCH LB.
EFFECT ON GUARANTEED PERFORMANCE: * <u>None</u>		
* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL  ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:		<i>m.c.</i>  <u>4/21/61</u>  ENGINEERING APPROVAL
LATEST DATE OF ACCEPTANCE:		AIRPLANES AFFECTED:
SPECIAL PROVISIONS:		EFFECT ON PRICE PER AIRPLANE: RECURRING: _____ NON-RECURRING: _____ TOTAL: _____

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_

Title: Specification Administrative Change Revision to RMI  
Part Number of

Origin: Convair initiated

Reason for Change: Specification correction and revision to RMI  
part number.

Description of Change:

Page A-4, APPENDIX I-C INSTRUMENTS AND RELATED EQUIPMENT:

FLIGHT INSTRUMENTS

Change the below listed equipment as follows:

<u>"From:</u>	2 Indicator, Radio Magnetic	Pioneer	36135-15-19-A-
<u>To:</u>	2 Indicator, Radio Magnetic	Eclipse- Pioneer	36105-1N-14-CJ

SPERRY INTEGRATED FLIGHT SYSTEM

Delete: The following item:

"2 Indicator RMI	Bendix	36126-1AF-25-A-
------------------	--------	-----------------

Effect on Weight Empty:	0
Effect on Balance:	0
Effect on Performance:	None



# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,019 DTD \_\_\_\_\_

CHANGE NO: 29

MODEL: 22-21(#1)  
22-21(#4) (Convair "880")

TITLE: Specification Administrative Change (Miscellaneous Design Improvement Changes)

ORIGIN: Convair initiated

REASON FOR CHANGE: Product improvement

### EFFECT ON WEIGHT \*

### EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

0

0

0


INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

 6/27/61

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_

Title: Specification Administrative Change (Miscellaneous Design Improvement Changes)

Origin: Convair initiated

Reason for Change: Product improvement

Description of Change:

Page 3a, GENERAL ARRANGEMENT:

Replace above illustration in the specification with Enclosure (A) which shows Krueger Flap installation between inboard pylon and fuselage, and trailing edge inboard flap extension.

Page 26, Paragraph 3.10.1.3 RUDDER SYSTEM:

Insert the following sentence after the third sentence:

"In addition a hydraulically-operated servo unit powered from one hydraulic system shall be installed in the pedal linkage, in the nose wheel well, to reduce rudder pedal forces."

Page 27, Paragraph 3.10.2.1 LIFT AND DRAG INCREASING DEVICE SYSTEMS:

Delete the paragraph and substitute the following:

"LIFT AND DRAG INCREASING DEVICE SYSTEMS: The trailing edge flaps and leading edge slats and flaps shall be operated by hydraulic power controlled by a single lever on the pilot's pedestal. The leading edge slats and flaps shall be operated through torque tubes from a gear box which is powered by two hydraulic motors, one motor connected to each hydraulic system. The trailing edge flaps shall be operated through torque tubes from a gear box which is powered by either of two motors, one motor connected to each hydraulic system. By means of "no-back" type devices incorporated in the screw jacks, each control system shall be irreversible to prevent flap motion from airload. Full trailing edge flap deflection and leading edge slat and flap extension shall be obtainable from either hydraulic system. A monitoring system shall be provided to preclude asymmetrical positioning of the trailing edge flap in the event of mechanical failure. A pair of lights, one amber and one green, shall be installed on the center instrument panel for each right and left hand set of leading edge devices (slats and flaps). Lights shall illuminate "green" when the devices have fully extended and shall illuminate "amber" while the devices are in transit."



Page 49a, HYDRAULIC SYSTEM:

Replace the above illustration in the specification with Enclosure (B) which shows 100 percent flap power available from either No. 1 or No. 2 Systems, rudder pedal boost and deletes "TEMP. CONTROL" callout.

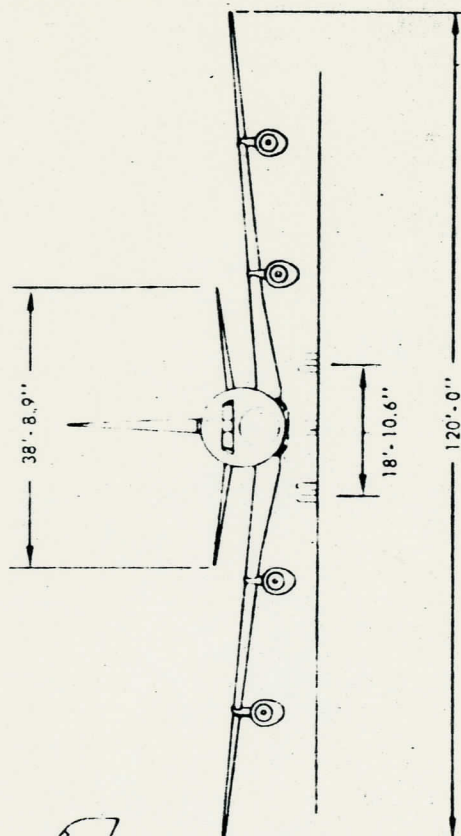
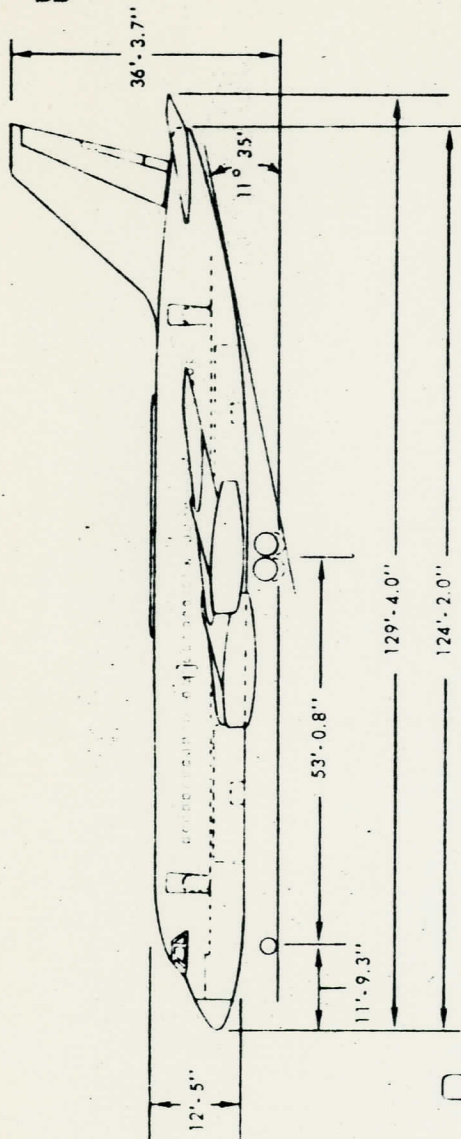
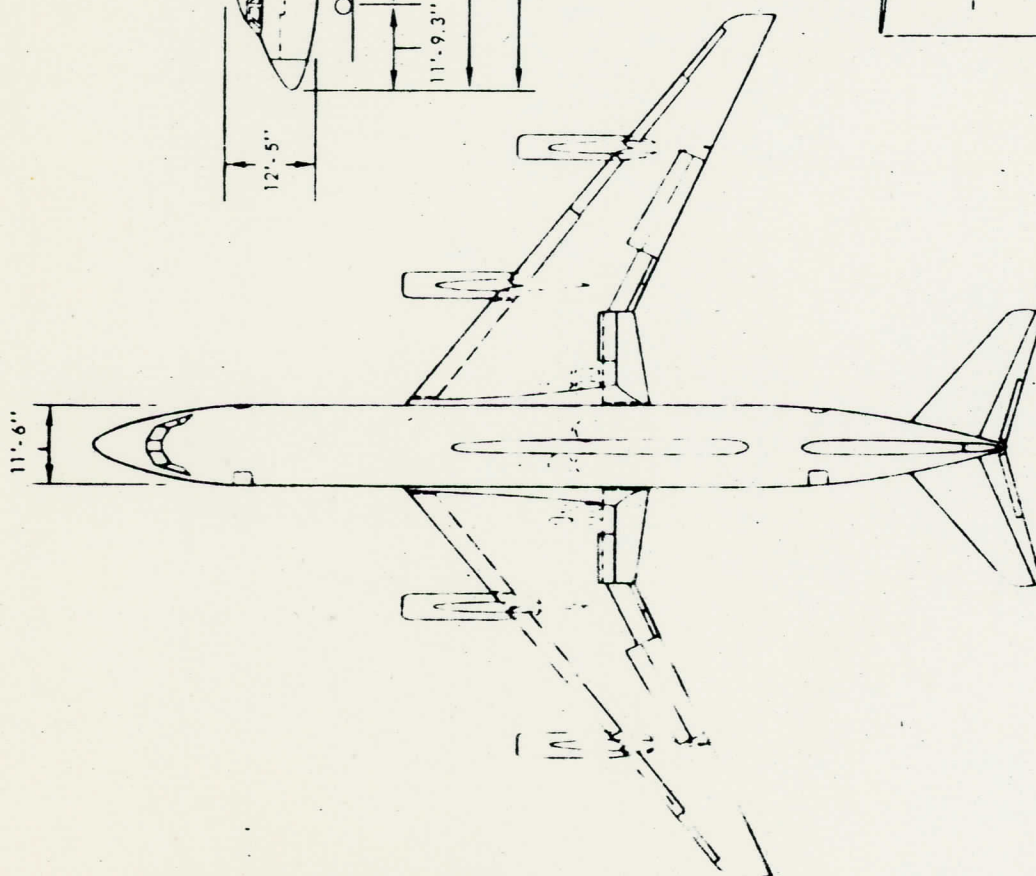
Enclosure: (A) One copy Page 3a - GENERAL ARRANGEMENT (Revised)

Enclosure: (B) One copy Page 49a - HYDRAULIC SYSTEM (Revised)

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None

CONVAIR: SD

Page 3a  
Report No. ZD-22-321  
Model 22M



GENERAL ARRANGEMENT





# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,018 DTD \_\_\_\_\_

CHANGE NO: 28

MODEL: 22-21 (#1) 22-21 (#4) (Convair "880")

TITLE: Specification Administrative Change (Revision to Passenger Seat Back Movement)

ORIGIN: Convair initiated

REASON FOR CHANGE: To make specification language agree with actual seat back positioning capability.

EFFECT ON WEIGHT \*

EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

0

0

0 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*[Signature]* 2/16/61

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Revision to Passenger Seat Back Movement)

Origin: Convair initiated

Reason for Change: To make specification language agree with actual seat back positioning capability.

Description of Change:

Page 80, Paragraph 3.19.1.1.6.1 SEAT BACK MOVEMENT:

Revise the paragraph to read as follows:

"Each reclining seat shall be designed so that pressure applied on the aft side of the seat back will override the recline control lock without additional manual operation, and fold the seat back forward to its normal upright position. This pressure on the seat back shall not exceed 25 pounds. The seat back shall fold to approximately 30 degrees forward of the vertical position by applying a load of not less than 30 pounds, or more than 35 pounds, at the top of aft side of the seat back without removing the center arm rest. The seat back may be further folded to approximately a horizontal position by removing the center arm rest. Seat back positions shall be as follows:

First Class Seats:

Normal Upright:	15 degrees aft of vertical
Normal Recline:	38 degrees aft of vertical (With integral folding food trays installed)
Maximum Recline:	45 degrees aft of vertical (With integral folding food trays not installed)

Coach Seats:

Normal Upright:	15 degrees aft of vertical
Maximum Recline:	38 degrees aft of vertical

Effect on Weight Empty:	0
Effect on Balance:	0
Effect on Performance:	None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,058 DTD 11 November 1960

CHANGE NO: 27

MODEL: 22-21(#1)  
22-21(#4) (Convair 880")

TITLE: Flight Data Recorder, Installation of

ORIGIN: AVENSA Telecon (Abels to Wintringer) on 9 November 1960

REASON FOR CHANGE: Customer request

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY		
+22.0 lbs	+22.0 lbs.	+7298	INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*[Signature]* 2/15/61

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Flight Data Recorder, Installation of

Origin: AVENSA Telecon (Abels to Wintriger) on 9 November 1960

Reason for Change: Customer request

Description of Change:

Page 45a, PITOT STATIC SYSTEM:

Replace above illustration in the specification with Enclosure (A) which shows Flight Data Recorder installed.

Page 47, Paragraph 3.14.4 - FLIGHT DATA RECORDER:

Revise the paragraph to read as follows:

"A Waste King No. 5424 flight data recorder shall be installed in the radio rack, and a Waste King No. 5690 acceleration sensor shall be installed in the left hand main wheel well as close as practicable to the airplane center of gravity. A Waste King No. 10110 encoder panel shall be installed on the copilot's console. The flight data recording system shall conform to AIRINC Characteristic No. 542".

Page 67, Paragraph 3.17.1 - EQUIPMENT:

Add the following item under "Description"

"Flight Data Recorder"

Page 67, Paragraph 3.17.1 - EQUIPMENT:

Delete the following item under "Provisions for the following systems shall be made".

"Flight Data Recorder (see 3.14.4)"

Page A-10, ELECTRONIC EQUIPMENT:

Add the following item to the page:

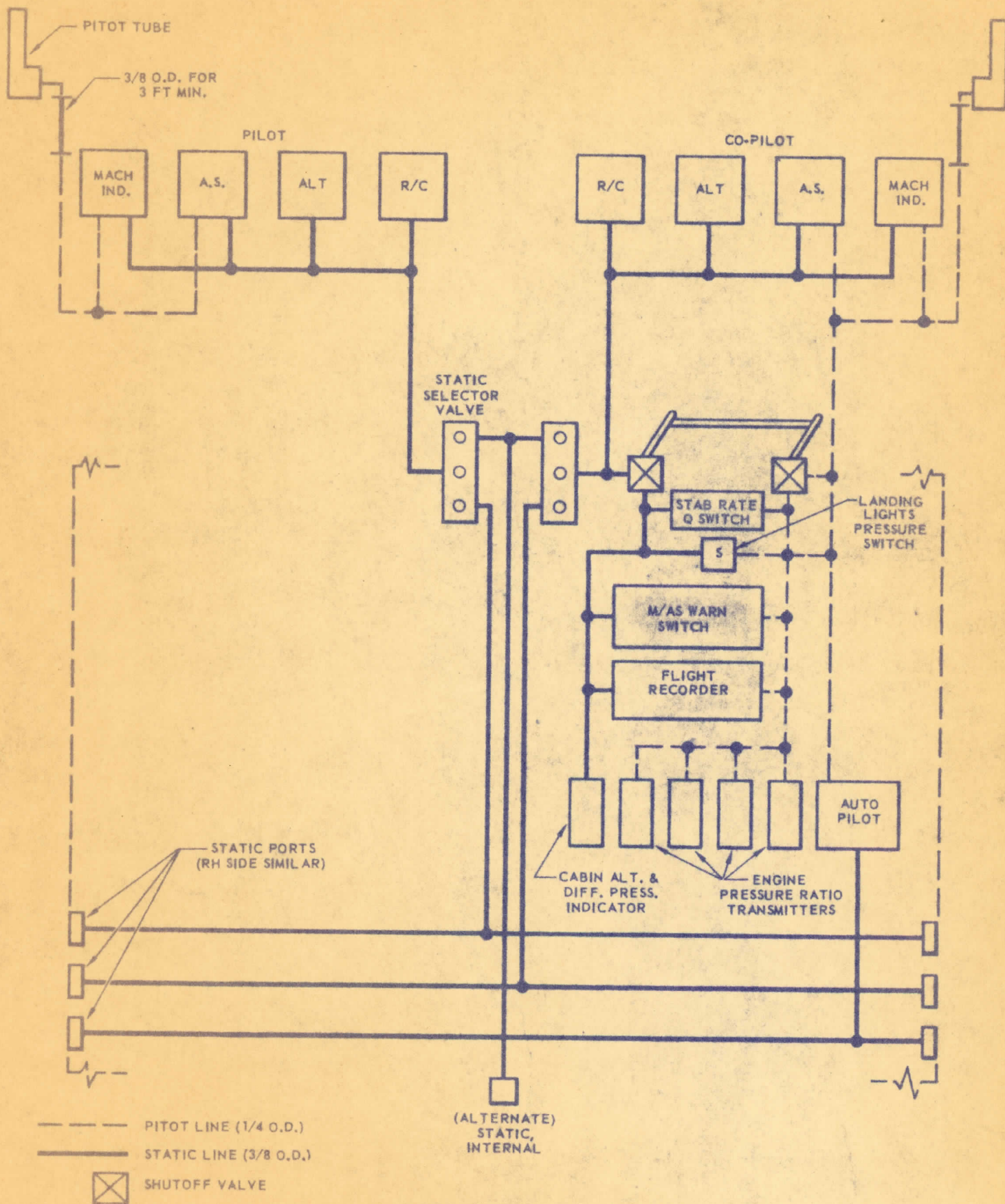
"FLIGHT DATA RECORDER SYSTEM"

1	Flight Data Recorder System, Consisting of the following:	Waste King	5424-200
1	Encoder (Trip and Date)	Waste King	10110
1	Magazine	Waste King	5427
1	Recording Unit	Waste King	10600-200
1	Acceleration Sensor	Waste King	5690"

Enclosure (A) One copy Page 45a - PITOT STATIC SYSTEM (Revised)

Effect on Weight Empty: +22.0 lbs.  
Effect on Balance: +7,298 in. lbs.  
Effect on Performance: None





# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,017 DTD \_\_\_\_\_

CHANGE NO: 26

MODEL: 22-21(#1) (Convair "880")

TITLE: Specification Administrative Change (Revision to Appendix I-C Useful Load Items)

ORIGIN: Convair initiated

REASON FOR CHANGE: To clarify the intent of the specification

### EFFECT ON WEIGHT \*

### EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

0

0

0

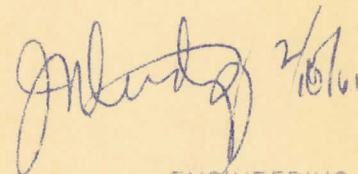
INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:



ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Revision to Appendix I-C  
Useful Load Items)

Origin: Convair initiated

Reason for Change: To clarify the intent of the specification.

Description of Change:

Page A-16, APPENDIX I-C, OXYGEN EQUIPMENT:

Revise the three top items under "Description" as follows:

From:	"3	*Cylinder, High Pressure Oxygen (107 cu ft) (with gages)	Zep Aero	ZC268-111	
	1	*Bottle, Portable Oxygen and Smoke Mask (310-liter)	Scott	6080-3	
	3	Bottle, Portable Oxygen (310-liter)	Scott	5500C1A-BF20B	
To:	"*3	Cylinder, High Pressure Oxygen (107 cu ft, with gages)	Zep Aero	ZC268-111	140
	*1	Bottle, Portable Oxygen and Smoke Mask (310- liter)	Scott	6080-3	} 60.
	*3	Bottle, Portable Oxygen (310-liter)	Scott	5500C1A-BF20B	

Add the following to the bottom of Page A-16:

"\*Useful Load Items"

Page A-17, APPENDIX I-C, FIRE EXTINGUISHING EQUIPMENT:

Add the following to the bottom of Page A-17:

"\*Useful Load Items"

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: 0

# C O N V A I R

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,016 DTD \_\_\_\_\_

CHANGE NO: 24

MODEL: 22-21(#1) (Convair "880")

TITLE: **Specification Administrative Change (Revision to Paragraph 3.14.2)**

ORIGIN: **Convair initiated**

REASON FOR CHANGE: **To clarify the intent of the specification.**

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	
0	0	0 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

**None**

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*[Signature]* 2/7/61

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



CONVAIR: SD

AVENSA  
Change No. 24

Title: Specification Administrative Change (Revision to Paragraph 3.14.2)

Origin: Convair initiated

Reason for Change: To clarify the intent of the specification.

Description of Change:

Page 44, Paragraph 3.14.2 - FLIGHT AND NAVIGATIONAL INSTRUMENTS -  
EQUIPMENT INTERCONNECTION AND DESCRIPTION:

Revise the paragraph to read as follows:

The pilot's pictorial deviation indicator and approach horizon are fed information from the No. 1 VOR receiver and No. 1 glide path receiver. The copilot's pictorial deviation indicator and approach horizon are fed information from the No. 2 VOR receiver and No. 2 glide path receiver.

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,015 DTD \_\_\_\_\_

CHANGE NO: 23

MODEL: 22-21 (#1) (Convair "880")

TITLE: Specification Administrative Change (Revision to Paragraphs 3.10.1.5.1 and 3.11.8)

ORIGIN: Convair initiated

REASON FOR CHANGE: To clarify the intent of subject paragraphs

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	
0	0	0
		INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*R. L. Sorensen*  
*J. H. Sorensen* 2/6/61  
ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Revision to Paragraphs 3.10.1.5.1 and 3.11.8)

Origin: Convair initiated

Reason for Change: To clarify the intent of subject paragraphs

Description of Change:

Page 26, Paragraph 3.10.1.5.1 - STABILIZER TRIM CONTROL:

Delete the last two sentences and substitute the following:

"A switch, guarded in the on position, shall be installed on the pedestal to shut off all hydraulic power to the stabilizer screw jack. A three-position momentary switch shall be installed on the pedestal which, after the hydraulic shutoff switch is moved to "OFF", operates the standby electrical-mechanical stabilizer trim control. In addition, hand cranks shall be installed on the pedestal for emergency manual stabilizer trim control".

Page 29, Paragraph 3.11.8 - INSPECTION AND MAINTENANCE:

Delete the last sentence and substitute the following:

"Each engine QEC (quick engine change build-up) shall be interchangeable and replaceable as a complete assembly, except for reverser cascades, and certain accessories which may not be required on individual installations".

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-321                      DATE: \_\_\_\_\_

CUSTOMER: AVENSA                      MCL 14,014 DTD \_\_\_\_\_

CHANGE NO.: 22                      MODEL: 22-21(#1) (Convair "880")

TITLE: Specification Administrative Change (Revision to Paragraph 3.17.1.7.1)

ORIGIN: Convair initiated

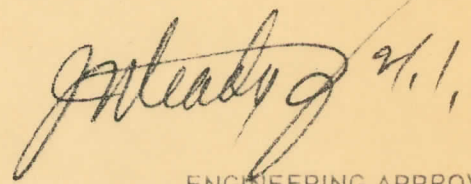
REASON FOR CHANGE: To clarify the intent of Paragraph 3.17.1.7.1.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	
0	0	0 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*  
None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

  
ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_  
NON-RECURRING: \_\_\_\_\_  
TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Revision to Paragraph 3.17.1.7.1)

Origin: Convair initiated

Reason for Change: To clarify the intent of Paragraph 3.17.1.7.1.

Description of Change:

Page 72, Paragraph 3.17.1.7.1 POWER CONTROLS:

Delete the paragraph and substitute the following:

"3.17.1.7.1 POWER CONTROLS: One "NORMAL" and one "ESSENTIAL" switch, located accessible to both pilots, shall control the ac and dc power to the radio equipment. The "NORMAL" switch shall control the weather radar, the marker beacon, selective call systems No. 1 and No. 2, glide slope No. 2, navigation instrument transformer No. 2, VHF navigation No. 2, radio compass No. 2, VHF communication receiver No. 2, VHF communication transmitter No. 2, HF communication No. 2, DMET No. 1 and No. 2, if installed, and ATC transponder No. 1 and No. 2, if installed. The "ESSENTIAL" switch shall control the VHF communication receiver No. 1, VHF communication transmitter No. 1, VHF navigation No. 1, glide slope No. 1, Radio compass No. 1, navigation instrument transformer No. 1, and HF communication No. 1. The emergence dc bus, through suitable circuit breakers, shall power the audio selector panels, the public address amplifier, the interphone, the pilot compartment speaker, the flight data recorder, if installed, and the tape reproducer. All No. 1 normal radio equipment shall be supplied by a separate ac and dc line. All No. 2 normal radio equipment shall be supplied by a second separate ac and dc line. Protection shall be provided for each line. The power supply, feeder wires, circuit protection for equipment which back up each other functionally shall be separated in a manner that will preclude operation failure of both if any one circuit protective device feeder wire or power supply fails. Illumination shall be provided for the circuit breakers."

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

SPEC NO.: ZD-22-321 DATE: \_\_\_\_\_  
CUSTOMER: AVENSA MCL 14,013 DTD \_\_\_\_\_  
CHANGE NO: 21 MODEL: 22-21-1 (Convair "880")

REASON FOR CHANGE: Product improvement

EFFECT ON BALANCE \*

INCH LB.

None

Meade 11/21/61

ENGINEERING APPROVAL

AIRPLANES AFFECTED:

TOTAL:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Revision to Auxiliary Landing Gear Tail Skid)

Origin: Convair initiated

Reason for Change: Product improvement

Description of Change:

Page 23, Paragraph 3.8.3 AUXILIARY LANDING GEAR (TAIL SKID):

Change the first line in the paragraph to read as follows:

From: "A retractable skid or ..... "

To: "A skid or ..... "

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

CONVAIR, S.O. 6-1217A



CONVAIR: SD

AVENSA  
Change No. 20

Title: Main Tires, Fabric Reinforced, Installation of

Origin: Convair initiated

Reason for Change: Product improvement

Description of Change:

Page A-14, APPENDIX I-C, LANDING GEAR EQUIPMENT:

Revise the below item under "Description" as follows:

<u>From:</u>	"8 Tire, Main Wheel (39 x 13) Type VII 22 Ply Rating, Skid Depth .25-inches)	U. S. Rubber"
<u>To:</u>	"8 Tire, Main Wheel (39 x 13) (Type VII, 22-Ply Rating, Fabric-Reinforced Tread, Skid Depth .35-Inch)	U. S. Rubber"

Effect on Weight Empty:	+23.0 pounds
Effect on Balance:	+20,194 inch-pounds
Effect on Performance:	None

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

MODEL: 22-21 (#1) (Convair "880")

DATE: \_\_\_\_\_



Title: Periscopic Sextant Provisions, With Mount; Installation of

Origin: Customer requested

Reason for Change: As above

Description of Change:

Page 44, Add the following new paragraph to the page, after Paragraph 3.14.2:

3.14.2.1 PERISCOPIC SEXTANT (Provisions Only): Provisions shall be made for the later installation of a periscopic sextant in the pilot's compartment. The provisions shall include the installation of a periscopic sextant mount in the top of the fuselage aft of the pilot's overhead panel, installation of overhead trim, lighting and overhead bumpers in the sextant mount area".

Page A-4, APPENDIX I-C, INSTRUMENTS AND RELATED EQUIPMENT:

Add the following item under "FLIGHT INSTRUMENTS"

"1 Mount, Periscopic Sextant	Kollzman	1287M-01"
------------------------------	----------	-----------

Effect on Weight Empty:	+10.0 lbs.
Effect on Balance:	+2,891 in lbs.
Effect on Performance:	None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

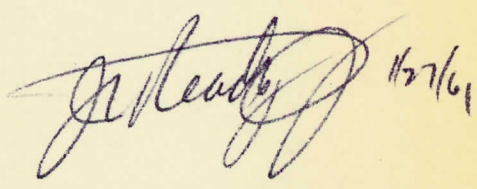
DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,060 DTD 16 December 1960

CHANGE NO: 17

MODEL: 22-21 (#1 & #4) Convair "880"

TITLE: <u>Edo Loran, Installation of</u>		
ORIGIN: <u>Customer requested</u>		
REASON FOR CHANGE: <u>As above</u>		
EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY  <u>+46.0 lb</u>	OPER. WT. EMPTY  <u>+46.0 lb</u>	+15,504 INCH LB.
EFFECT ON GUARANTEED PERFORMANCE: *  <u>None</u>		
* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL  ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:		 ENGINEERING APPROVAL
LATEST DATE OF ACCEPTANCE: _____		AIRPLANES AFFECTED: _____
SPECIAL PROVISIONS: _____		EFFECT ON PRICE PER AIRPLANE: RECURRING: _____ NON-RECURRING: _____ TOTAL: _____

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Edo Loran, Installation of

Origin: Customer requested

Reason for Change: As above

Description of Change:

Page 43, Paragraph 3.14.1.5 MISCELLANEOUS INSTRUMENTS:

Add the following item to the instrument list:

"One Loran Indicator"

Page 44a, PILOT'S AND COPILOT'S CONSOLE AND WING PANELS:

Replace above illustration in specification with Enclosure (A)  
which shows "Edo Loran" and relocates copilot's oxygen mask stowage.

Page 67, Paragraph 3.17.1 EQUIPMENT:

Add the following item under "Description"

"Loran Navigation System"

Page 68, Paragraph 3.17.1.1 CONTROL PANELS:

Add the following item under "Description"

"Loran (1)"

Page 77, Add the following new paragraphs to the page after Paragraph  
3.17.3.6:

"3.17.3.7 LORAN SYSTEM: A Loran receiver shall be installed  
in the radio rack.

3.17.3.7.1 ANTENNA: Wiring shall be installed to permit connec-  
tion of the Loran receiver unit to the HF antenna  
through an antenna coupler located in the tail cone.

3.17.3.7.2 CONTROLS: A Loran control panel and indicator shall  
be installed on the copilot's console."

CONVAIR: SD

AVENSA  
Change No. 17

Page 2 of 2

Page A-10, APPENDIX I-C, ELECTRONIC EQUIPMENT:

Add the following item to the page:

"LORAN

1	Receiver	EDO	31742
1	Indicator/Scope	EDO	25335"

Page A-11, APPENDIX I-C, ELECTRONIC EQUIPMENT:

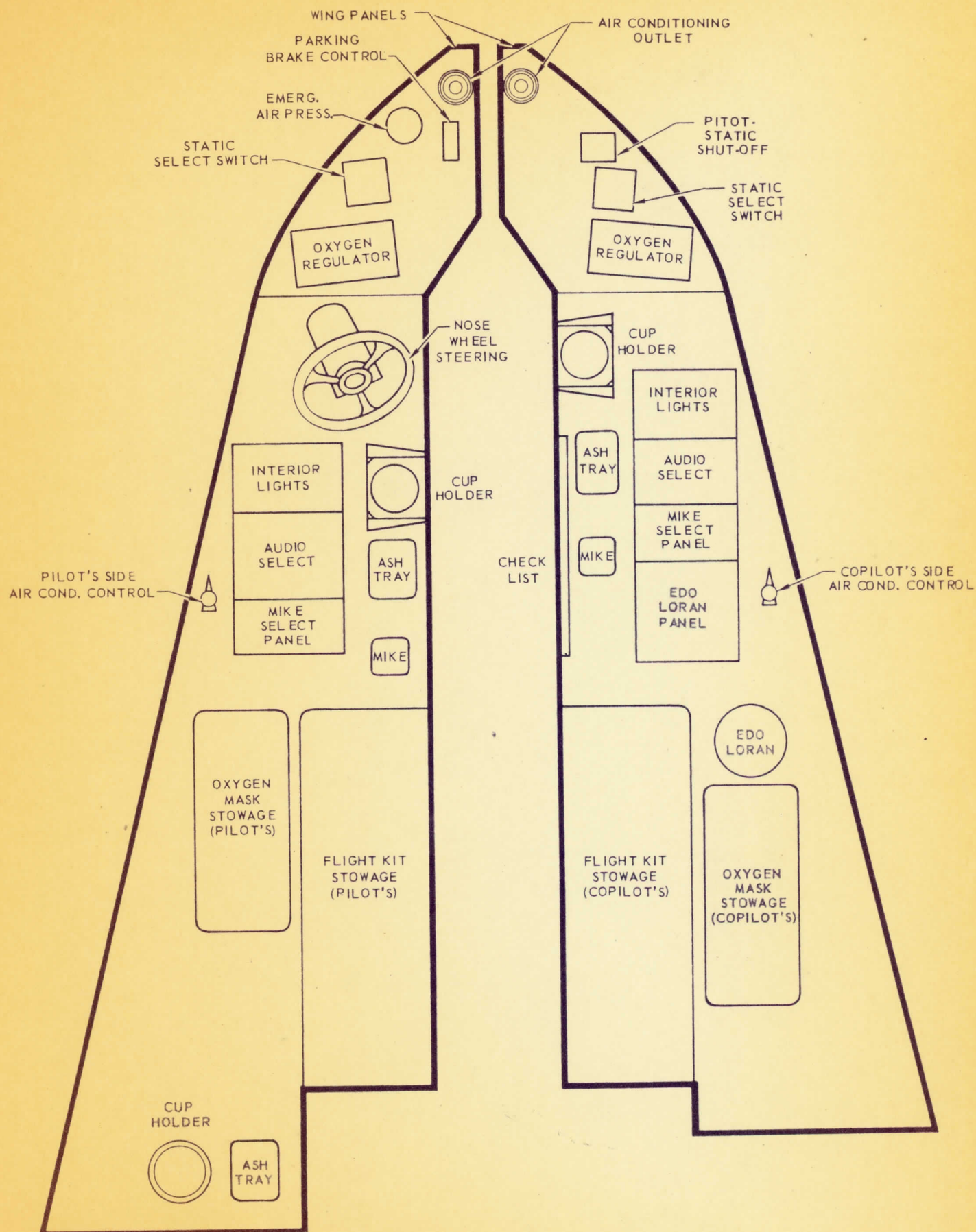
Add the following item under "CONTROL PANELS":

"1 Loran Control Panel EDO (P/N to be supplied)"

Enclosure: (A) One copy Page 44a - PILOT'S AND COPILOT'S CONSOLE  
AND WING PANELS (Revised)

Effect on Weight Empty: +46.0 pounds  
Effect on Balance: +15,504 inch-pounds  
Effect on Performance: None





# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,057 DTD \_\_\_\_\_

CHANGE NO: 16

MODEL: 22-21 (#1) (Convair "880")

TITLE: Ram Air Temperature Indicating System, Installation of

ORIGIN: Convair initiated

REASON FOR CHANGE: To comply with FAA requirement

EFFECT ON WEIGHT \*

EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

Negligible

Negligible

Negligible

INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND  
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON  
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*[Signature]* 12/14/60

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Ram Air Temperature Indicating System, Installation of

Origin: Convair initiated

Reason for Change: To comply with FAA requirement

Description of Change:

Page 43A, PILOT'S AND COPILOT'S INSTRUMENT PANELS:

Above illustration will be revised by a subsequent administrative type proposal which will show the Ram Air Temperature Indicator on the copilot's panel.

Page 42, Paragraph 3.14.1.2 - COPILOT'S INSTRUMENTS:

Add the following item to the copilot's instrument list:

"One ram air temperature indicator"

Page A-4, APPENDIX I-C, INSTRUMENTS AND RELATED EQUIPMENT:

Add the following items under "FLIGHT INSTRUMENTS":

"1 Indicator, Ram Air Temperature	Lewis	162C26
1 Bulb, Ram Air Temperature	Lewis	54B-1A"

Effect on Weight Empty:	Negligible
Effect on Balance:	Negligible
Effect on Performance:	None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,012 DTD \_\_\_\_\_

CHANGE NO: 15

MODEL: 22-21(#1) (Convair "880")

TITLE: Specification Administrative Change (Revision to Engine Specification)

ORIGIN: Convair initiated

REASON FOR CHANGE: To specify the G.E. Engine Specification under which engines will be supplied

EFFECT ON WEIGHT \*

EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

0

0

0

INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*[Signature]* 12/17/60

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Revision to Engine Specification)

Origin: Convair initiated

Reason for Change: To specify the G.E. Engine Specification under which engines will be supplied.

Description of Change:

Page 2, Paragraph 2.2 - ENGINE SPECIFICATION:

Revise the paragraph as follows:

From: "General Electric Engine Specification E-723h dated 1 September 1959 shall apply".

To: "General Electric Engine Specification E-790 dated 11 July 1960 with Reverser Specification E-725e dated 11 July 1960 and Suppressor Specification E-731f dated 11 July 1960 shall apply".

Page 4, Paragraph 3.1.1.1 - PERFORMANCE:

In the ninth line, change "E-723h, dated 1 September 1959" to "E-790, dated 11 July 1960".

Page A-3, APPENDIX I-C, PROPULSION EQUIPMENT:

Revise the following item under "POWER PLANT EQUIPMENT" as follows:

From: "4 Engine, complete \*(Dry) Gen. Electric CJ-805-3B"

To: "4 Engine, complete \*(Dry) Gen. Electric CJ-805-3B  
Spec. No. E-790  
dated 7-11-60".

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,011 DTD \_\_\_\_\_

CHANGE NO: 14

MODEL: 22-21 (#1) (Convair "880")

TITLE: Specification Administrative Change (Addition of Static Inverter to Paragraph 3.16.2.4.1)

ORIGIN: Convair initiated

REASON FOR CHANGE: To specify that static inverter is being furnished

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	0 INCH LB.
0	0	

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*W. C.*

*[Signature]* 11/17/60

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Addition of Static Inverter to Paragraph 3.16.2.4.1.

Origin: Convair initiated

Reason for Change: To specify that static inverter is being furnished.

Description of Change:

Page 51, Paragraph 3.16.2.4.1 - POWER TRANSFER:

Add the following to the end of paragraph:

"A static inverter, connected to the battery, shall be provided for engine ground start when external a-c electrical power is not available".

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,010 DTD \_\_\_\_\_

CHANGE NO: 13

MODEL: 22-21(#1) (Convair "880")

TITLE: Specification Administrative Change (Clarification of Cabin Ceiling Height)

ORIGIN: Convair initiated

REASON FOR CHANGE: To clarify cabin height in the area of the dropped ceiling.

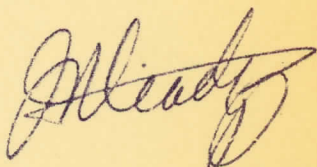
EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY		
0	0	0	INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*  
None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*mzc*

 11/1/60

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:
	RECURRING: _____
	NON-RECURRING: _____
	TOTAL: _____

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Clarification of Cabin Ceiling Height.

Origin: Convair initiated.

Reason for Change: To clarify cabin height in the area of the dropped ceiling.

Description of Change:

Page 85, Paragraph 3.19.3.1.1 - PASSENGER COMPARTMENT:

Revise the last sentence to read as follows:

"The clear ceiling height in the main cabin shall be approximately 85 inches at the airplane centerline except in the area of the dropped ceiling which shall be approximately 78 inches".

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-321 DATE: \_\_\_\_\_

CUSTOMER: AVENSA MCL 14,008 DTD \_\_\_\_\_

CHANGE NO: 11 MODEL: 22-21(#1) (Convair "880")

TITLE: **Specification Administrative Change (Revision to Paragraph 3.16.8.3.4 and to ADF Control Panel P/N)**

ORIGIN: **Convair initiated**

REASON FOR CHANGE: **To clarify the intent of the specification**

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	
0	0	0 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

**None**

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*W. J. Clayton*

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Revision to Paragraph 3.16.8.3.4 and to ADF Control Panel P/N)

Origin: Convair initiated.

Reason for Change: To clarify the intent of the specification.

Description of Change:

Page 61, Paragraph 3.16.8.3.4 - READING LIGHTS:

Delete the last seven words in the fourth sentence, which reads as follows, and repunctuate sentence:

"and placarded to clearly indicate its function".

Page A-11, APPENDIX I-C, ELECTRONIC EQUIPMENT:

Revise the below item under "Control Panels" as follows:

<u>From:</u>	"2 Radio Compass (ADF)	Collins	614L-5"
<u>To:</u>	"2 Radio Compass (ADF)	Collins	614L-6"

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,007 DTD \_\_\_\_\_

CHANGE NO: 10

MODEL: 22-21 (#1) Convair 380"

TITLE: **Specification Administrative Change (Revision to Flare Dispenser Language)**

ORIGIN: **Convair initiated**

REASON FOR CHANGE: **To clarify the intent of the specification.**

### EFFECT ON WEIGHT \*

### EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

0

0

0

INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

**None**

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*[Handwritten Signature]*  
10-21-60

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Revision to  
Flare Dispenser Language)

Origin: Convair initiated

Reason for Change: To clarify the intent of the specification

Description of Change:

Page 84, Paragraph 3.19.2.6.1 - FLARE DISPENSER (PROVISIONS):

Delete the paragraph and paragraph title and substitute the  
following:

"FLARE DISPENSERS: Two electrically-operated flare dispensers shall be installed to eject flares vertically downward from the aft fuselage area. Means for inspecting the latch after flare loading shall be provided. The release of flares shall be controlled from the pilot compartment by safe guarded electrical switches, wired so as to prevent inadvertent release of the flares".

Page A-15, APPENDIX I-C, FURNISHINGS:

Add the following items under "Description"

"2	Flare, Emergency	Kilgore Mfg.	Wiley, Type SA-8
2	Dispenser, Emergency Flare	Convair	

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,006 DTD \_\_\_\_\_

CHANGE NO: 9

MODEL: 22-21(#1) (Convair "880")

TITLE: Specification Administrative Change (Revision to Emergency Radio Transmitter Stowage)

ORIGIN: Convair initiated

REASON FOR CHANGE: To clarify stowage location of Emergency Radio Transmitter

### EFFECT ON WEIGHT \*

### EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

Negligible

Negligible

Negligible INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*[Handwritten Signature]*  
9/28/60

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Revision to Emergency Radio Transmitter Stowage)

Origin: Convair initiated

Reason for Change: To clarify stowage location of Emergency Radio Transmitter

Description of Change:

Page 77, Paragraph 3.17.3.6 EMERGENCY RADIO TRANSMITTER:

Revise the first sentence as follows:

From: "Provisions shall be made for the stowage of one AN/CRT-3 Emergency Radio Transmitter in the aft left hand stowage compartment."

To: "Provisions shall be made for the stowage of one AN/CRT-3 Emergency Radio Transmitter in the right hand movable coat compartment."

Page 90, Paragraph 3.19.7.2 EMERGENCY TRANSMITTER:

At the end of sentence, change the paragraph reference from "3.17.3.5.3" to "3.17.3.6".

Effect on Weight Empty: Negligible  
Effect on Balance: Negligible  
Effect on Performance: None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,005 DTD \_\_\_\_\_

CHANGE NO: 8

MODEL: 22-21(#1) (Convair "880")

TITLE: Specification Administrative Change (Revision to Paragraph 3.7.1.5.3.1)

ORIGIN: Convair initiated

REASON FOR CHANGE: To clarify the intent of the specification.

EFFECT ON WEIGHT \*

EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

0

0

0 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*[Handwritten Signature]*

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



CONVAIR: SD

AVENSA  
Change No. 8

Title: Specification Administrative Change (Revision to Paragraph 3.7.1.5.3.1)

Origin: Convair initiated

Reason for Change: To clarify the intent of the specification.

Description of Change:

Page 18, Paragraph 3.7.1.5.3.1 FORWARD CARGO DOOR:

Revise the second sentence to read as follows:

"The door shall be operable from inside or outside and shall have an opening of 41 inches projected vertical height by 48 inches wide."

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,004 DTD \_\_\_\_\_

CHANGE NO: 7

MODEL: 22-21(#1) (Convair "880")

TITLE: Specification Administrative Change (Revision to Paragraphs 3.16.7.1.2, 3.16.7.2 and Pilots' Instrument Panel Illustration)

ORIGIN: Convair initiated

REASON FOR CHANGE: To clarify the intent of the specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	
0	0	0 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*W. Carlson*  
9/19/60

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Revision to Paragraphs 3.16.7.1.2, 3.16.7.2 and Pilots' Instrument Panel Illustration)

Origin: Convair initiated

Reason for Change: To clarify the intent of the specification.

Description of Change:

Page 43A, PILOT'S AND COPILOT'S INSTRUMENT PANELS:

Replace above illustration in the specification with Enclosure (A) which corrects the fuse callout on Pilot's and Copilot's panels.

Page 55, Paragraph 3.16.7.1.2 FUSES:

Delete the following four words in the first sentence:

"conforming to CAR requirements"

Page 56, Paragraph 3.16.7.2 PROTECTOR PANELS:

Delete the last two sentences and substitute the following:

"Space provisions including mounting holes for approximately ten percent additional circuit breakers shall be provided for the combined group of flight deck circuit breaker panels after finalization of panel original design."

Enclosure: (A) One copy Page 43a - PILOT'S AND COPILOT'S INSTRUMENT PANELS (Revised)

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None





# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,003 DTD \_\_\_\_\_

CHANGE NO: 6

MODEL: 22-21(#1) (Convair "880")

TITLE: Specification Administrative Change (Revised C. G. Limits Graph)

ORIGIN: Convair initiated

REASON FOR CHANGE: To furnish an up to date C. G. Limits Graph.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	O INCH LB.
O	O	

EFFECT ON GUARANTEED PERFORMANCE: \*  
None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*[Signature]*  
ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_

CONVAIR: SD

AVENSA  
Change No. 6

Title: Specification Administrative Change (Revised C. G. Limits Graph)

Origin: Convair initiated

Reason for Change: To furnish an up to date C. G. Limits Graph.

Description of Change:

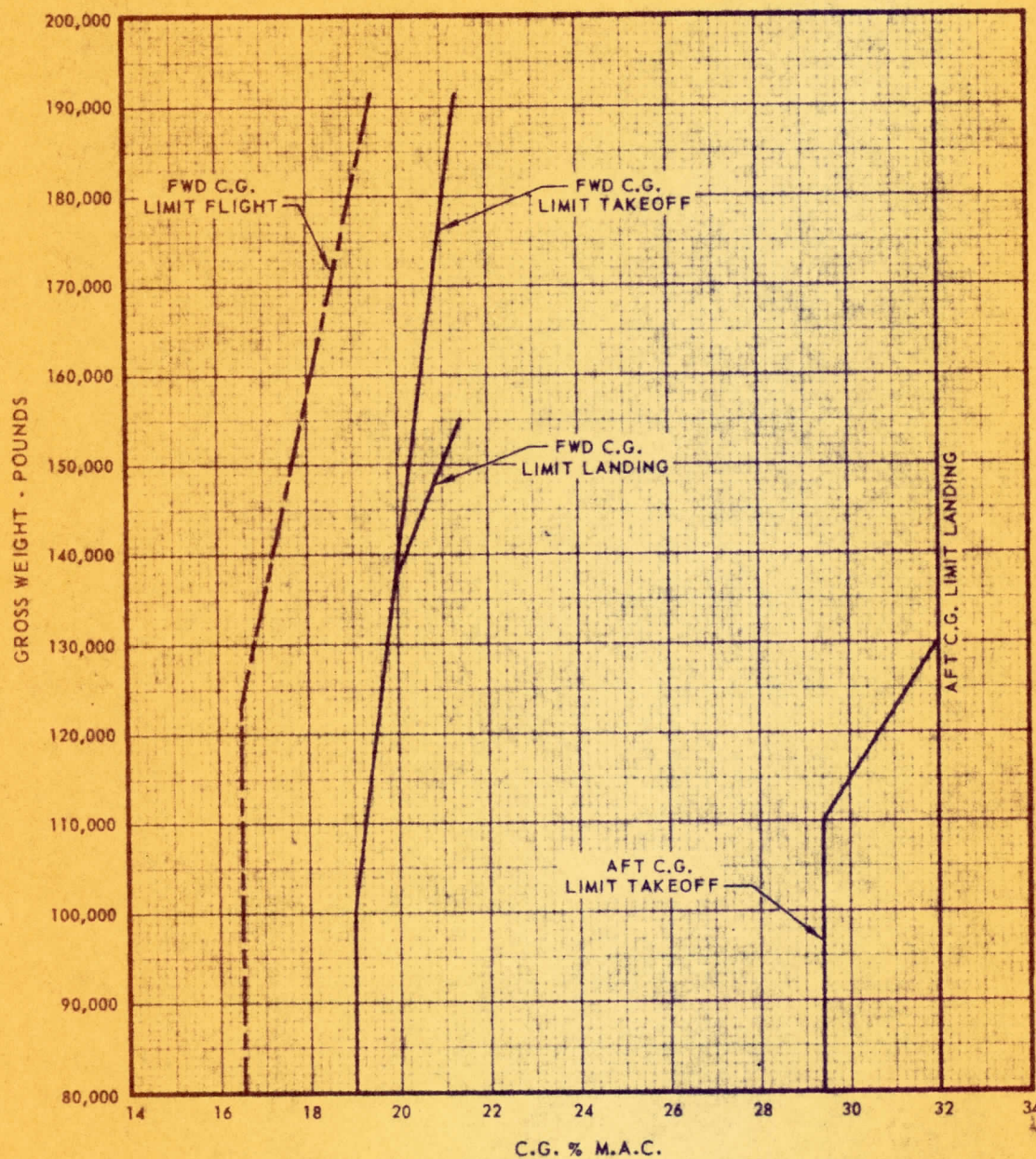
Page 7a, C. G. DESIGN LIMITS:

Replace above illustration in the specification with Enclosure (A) which adds new aft C. G. Limit takeoff and landing.

Enclosure: (A) One copy Page 7a, C. G. LIMITS (Revised)

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None







# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,052 DTD 13 June 1960

CHANGE NO: 5

MODEL: 22-21 (#1) (Convair "880")

TITLE: Cargo Compartment Tie-Down Rings, Installation of

ORIGIN: Convair initiated

REASON FOR CHANGE: To comply with FAA requirement.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	
+24.0 lb	+24.0 lb	+19,260 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*[Signature]*  
8/30/60

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



CONVAIR: SD

AVENSA  
Change No. 5

Title: Cargo Compartment Tie-Down Rings, Installation of

Origin: Convair initiated

Reason for Change: To comply with FAA requirement

Description of Change:

Page 84, Paragraph 3.19.2.4 LUGGAGE AND CARGO COMPARTMENTS:

Add the following after the first sentence:

"The flooring in both the forward and aft cargo compartments shall be reinforced as required and shall be provided with 12 each flush-type tie-down rings for securing heavy or uncrated cargo."

Effect on Weight Empty:	+24.0 pounds
Effect on Balance:	+19,260 inch-pounds
Effect on Performance:	None

# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,002 DTD \_\_\_\_\_

CHANGE NO: 4A

MODEL: 22-21(#1) (Convair "880")

TITLE: Specification Administrative Change (Miscellaneous Revision to Specification Language)

ORIGIN: Convair initiated

REASON FOR CHANGE: To clarify the intent of the specification, and revision to CCP No. 4.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	0 INCH LB.
0	0	

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*[Signature]*  
9/27/60

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED: \_\_\_\_\_

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_



Title: Specification Administrative Change (Miscellaneous Revision to Specification Language)

Origin: Convair initiated

Reason for Change: To clarify the intent of the specification, and revision to CCP No. 4.

Description of Change:

Page 11, Paragraph 3.4.2 DESIGN SPEEDS: (Equivalent Air Speed)

Delete "(Equivalent Air Speed)" from paragraph title, and add the following directly under the paragraph title:

"The airplane shall be designed to be operated at the following equivalent airspeeds:"

Add the following to the end of the paragraph:

"The airplane shall be placarded to be operated at the following indicated airspeeds:

Operating speed (flaps full down)	195K or M = 0.40
Operating speed (flaps 3/4 down)	220K or M = 0.50
Operating speed (flaps 1/2 down)	245K or M = 0.60
Operating speed (main landing gear extension)	375K or M = 0.89
Operating speed (nose landing gear extension)	320K or M = 0.83
Operating speed (landing gear retraction)	270K or M = 0.70
Operating speed (leading edge device extension)	245K or M = 0.60"

Page 20, Paragraph 3.8.1 - GENERAL DESCRIPTION AND COMPONENTS:

Deleted the following last sentence of the paragraph to avoid repetition, since the same intent is shown in paragraphs 3.4.2 and 3.5.4.5.

"The main landing gear shall be designed for extension at speeds up to 375 knots EAS for use as drag increasing devices".

Page 20, Paragraph 3.8.1.2 - PIN JOINTS AND FITTINGS:

Added the words "subject to rotation" to the first sentence of the paragraph, to clarify specification text. The revised sentence now reads:

"All pin joints, subject to rotation in the landing gear structure and retracting mechanism shall be provided with replaceable bushings and pins to compensate for looseness resulting from wear".

Page 32, Paragraph 3.12.6.1 - REVERSE THRUST:

In the second sentence change 40 percent to 38.5 percent. The sentence will then read as follows:

"As a design objective a minimum of 38.5 percent of static take off net thrust shall be available in the reverse direction".

Page 36, Paragraph 3.12.9.6 - PIPING AND FITTINGS:

In the second sentence of paragraph 3.12.9.6, the aluminum alloy call-out should read "6061-T6" in lieu of "6061-ST6". This revision corrects a typographical error and the revised portion of the sentence now reads:

".....6061-T6 aluminum alloy tubing when used with Ermeto type fittings....."

Page 37, Add the following new paragraph:

"3.12.9.7.8 - DEFUEL VALVES: Two defuel valves shall be controlled from the pilot compartment. The valves shall be electrically actuated and located between the engine cross-feed line and the refuel manifolds. Provisions for electrical indication of opening shall be incorporated in each valve by means of an indicator light, which shall be "ON" when the valve is open".

Page 46, Paragraph 3.14.3.6 - INSTRUMENT LINES AND CONNECTIONS:

The ninth sentence of the paragraph has been revised as follows, to clarify specification text intent:

The words "with 5/16-inch end fittings" have been added and "3/16-hoses" has been changed to "1/4-inch end fittings". The revised sentence now reads:

"Flexible connections shall incorporate 1/4-inch hoses with 5/16-inch end fittings on the static side and 1/4-inch end fittings on the pitot side".

Page 48, Paragraph 3.15.1.4 - LINES (HYDRAULIC):

In the second sentence, delete reference to 505280 aluminum alloy, and specify in lieu thereof 5052-0 and/or 6061-T6 aluminum alloy. The sentence will then read as follows:



"Return lines shall be 5052-0 and/or 6061-T6 aluminum alloy except that stainless steel lines shall be used in the pod area and also in other areas where high pressures dictate its use".

Page 48, Paragraph 3.15.1.2 - FLUID:

The following paragraph has been corrected to show the addition of hydraulic fluid "500A":

"FLUID: The hydraulic systems shall be designed to function with Skydrol 500 or 500A hydraulic fluid".

Page 51, Paragraph 3.16.2.4.1 - POWER TRANSFER:

Delete the existing fifth sentence which describes the method of obtaining ground power, and substitute the following:

"To energize the ac busses from ground power, the four bus tie switches shall be in the closed position, the ground power connected, and the external power switch placed in the "ON" position".

Page 52, Paragraph 3.16.5.1 - GENERAL (WIRING):

In the next-to-the last sentence, delete "High temperature". The sentence will then read as follows:

"Wire current ratings shall be guided by AIA document "Design Manual for Aircraft Electrical Installations" as revised June 1958.

Page 55, Paragraph 3.16.7.1.2 - FUSES:

Delete the remainder of the paragraph after the first two sentences and substitute the following:

"Permanent labeling adjacent to each active fuse shall show the fuse rating in amperes and the device and/or circuit function which the fuse protects. Space provisions shall be provided on all fuse panels to permit installation of approximately ten percent additional fuses after finalization of panel original design. A supply of spare fuses conforming to CAR requirements shall be located so as to be accessible in flight. Spare fuses stowage shall indicate fuse rating. Spare fuses shall be provided in the following quantities:

100 percent spares for 12 or less active fuses of same rating per airplane. For more than 12 active fuses of same rating per airplane, 50 percent spares or a minimum of 12 spare fuses (whichever is greater)."

## Page 56, Paragraph 3.16.7.2 - PROTECTOR PANELS:

Delete the last two sentences and substitute the following:

"Space provisions including mounting holes for approximately ten percent additional circuit breakers shall be provided for the combined group of flight deck circuit breaker panels after finalization of panel original design".

## Page 57, Paragraph 3.16.7.7 - SWITCHES:

Delete the following second sentence of the paragraph since it does not apply to subject airplane configuration:

"Switch guards shall be installed where required".

## Page 64, Paragraph 3.16.10.3 - EXTERNAL POWER:

In the first sentence, delete the words "fluid drains", so that the sentence will read as follows:

"A receptacle for external ac power shall be provided in an area forward of the wing and clear of all protuberances".

Delete the second sentence which reads:

"The receptacle shall be protected against contamination".

## Page 65, Paragraph 3.16.11.1 - LANDING GEAR AND STABILIZER WARNING HORN:

Revise the last subparagraph describing intermittent warning horn operation as follows:

"When the airplane is on the ground and any one of the thrust levers is advanced to take-off position, the horn will operate intermittently if the speed brakes are not retracted. When the airplane is on the ground and any two or more of the thrust levers are advanced to take-off position, the horn will operate intermittently if the stabilizer and/or the flaps are not in the correct takeoff range".

## Page 65, Add the following new paragraph:

"3.16.11.1.1 - SPEED BRAKE WARNING HORN: An intermittent warning horn shall be provided to sound whenever the spoilers are not retracted and any two thrust levers are advanced beyond the 92 percent rpm position".



## Page 66, Paragraph 3.16.13 - RELAYS:

Delete the entire paragraph.

## Page 71, Paragraph 3.17.1.6 - RADIO JUNCTION PANELS:

In the last sentence, delete "without disturbing adjacent wiring" and add "with a minimum of disruption of adjacent wiring". The sentence will then read as follows:

"All terminals in terminal strips shall be the steel nonrotating type, shall remain secured to the strips when terminal connections are removed, and shall provide for removal of broken studs with a minimum of disruption of adjacent wiring".

## Page 76, Paragraph 3.17.3.4.2 - ANTENNA:

The words "external fairing" have been added to clarify specification text intent. The revised paragraph now reads:

"ANTENNA: One VHF Navigation antenna of the external fairing type shall be installed on the vertical stabilizer for reception of VHF navigation and runway localizer signals".

## Page 85, Paragraph 3.19.3.1.1 - PASSENGER COMPARTMENT:

In the last sentence, delete "except at the stowage box and entry areas". The sentence will then read as follows:

"The minimum clear ceiling height in the main cabin shall be approximately 85 inches at the airplane centerline".

## Page 87, Paragraph 3.19.3.6 - HAT RACKS:

Delete the last two sentences which read as follows:

"Storage bins to break the continuity of the hat racks shall be installed in four locations on each side of the aisle. A door, or doors, shall be provided for each bin".

## Page 88, Paragraph 3.19.4.1.2 - SHUTOFF VALVES:

Revise the shutoff valve description, so that the paragraph will read as follows:

"Shutoff valves, electrically actuated by one handle located in the pilot compartment, shall be provided for the fuel, hydraulic, and bleed air systems of each engine. (Reference 3.12.9.7.3, 3.15.1.6, and 3.16.16.)

Page 89, Paragraph 3.19.5.2 - COMPONENTS (OXYGEN):

Add reference to 5052 and/or 6060-T6 aluminum tubing to the third sentence, which will then read as follows:

"Aluminum tubing of 5052-0 and/or 6061-T6 material shall be used for low pressure lines".

Page 90, Paragraph 3.19.7.2 - EMERGENCY TRANSMITTER

Change paragraph reference "3.17.3.5.3" to "3.17.3.6". The paragraph will then read:

"EMERGENCY TRANSMITTER: Provisions for the emergency transmitter shall be made as specified in 3.17.3.6".

Page 100, Paragraph 3.23.2 - EQUIPMENT INTERCHANGEABILITY:

Delete: "Crew and Passenger Seat Back Cushions and Arm Rests Covers".

Add: "Passenger Seat Assembly  
Pilot and Copilot Seat Assembly  
Flight Engineer Seat Assembly  
Observer Seat Assembly"

Effect on Weight Empty: 0  
Effect on Balance: 0  
Effect on Performance: None



# CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION  
SAN DIEGO, CALIFORNIA

## COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-321

DATE: \_\_\_\_\_

CUSTOMER: AVENSA

MCL 14,055 DTD \_\_\_\_\_

CHANGE NO: 2

MODEL: 22-21 (Convair "880")

TITLE: Main System Hydraulic Pumps, Change to

ORIGIN: Convair initiated

REASON FOR CHANGE: Product improvement

### EFFECT ON WEIGHT \*

### EFFECT ON BALANCE \*

GUAR. WT. EMPTY

OPER. WT. EMPTY

+31.0 lb

+31.0 lb

+23,091

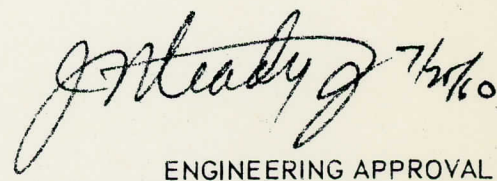
INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: \*

None

\* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND  
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON  
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

  
ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: \_\_\_\_\_

NON-RECURRING: \_\_\_\_\_

TOTAL: \_\_\_\_\_

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: \_\_\_\_\_

DATE: \_\_\_\_\_

Title: Main System Hydraulic Pumps, Change to

Origin: Convair initiated

Reason for Change: Product improvement

Description of Change:

Page A-12, APPENDIX I-C, HYDRAULIC AND PNEUMATIC EQUIPMENT:

Revise the below item under "Description" as follows:

From: "4 Pump, Main System  
(Variable Displacement  
Type)

Ham. Standard"

To: "4 Pump, Main System  
(Variable Displacement  
Type)

Vickers

AS-61695-L-2"

Effect on Weight Empty: +31.0 pounds  
Effect on Balance: +23,091 inch-pounds  
Effect on Performance: None

The following shall not appear in the Specification language:

The hydraulic pump will incorporate one electrical depressurization valve and one blocking valve. The bolt-on ports will be modified to suit the Model 22 installation, and the yoke blocked back to a 6 gpm rating in lieu of 10 gpm.

This proposal also deletes the four accumulators in the hydraulic return lines, since these accumulators are not required with the Vickers pump.